

**DECISION  
AND  
FINDING OF NO SIGNIFICANT IMPACT**

**ENVIRONMENTAL ASSESSMENT: REDUCING PIGEON, STARLING, AND SPARROW  
DAMAGE THROUGH AN INTEGRATED WILDLIFE DAMAGE MANAGEMENT PROGRAM  
IN THE STATE OF NORTH CAROLINA**

**United States Department of Agriculture  
Animal and Plant Health Inspection Service  
Wildlife Services**

**December 2008**

**I. INTRODUCTION**

The United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Wildlife Services (WS) program prepared an environmental assessment (EA) entitled "*Reducing pigeon, starling, and sparrow damage through an integrated wildlife damage management program in the State of North Carolina*". The EA evaluated potential impacts to the quality of the human environment from the implementation of a management program to address damage to property, agricultural resources, livestock facilities, airports, and threats to human safety caused by rock pigeons (*Columba livia*), European starlings (*Sturnus vulgaris*), and house sparrows (*Passer domesticus*) (USDA 2003)<sup>1</sup>. The EA evaluated the need for damage management and the relative effectiveness of four alternatives to meet that proposed need, while accounting for the potential environmental effects of those activities. WS' proposed action in the EA implements an integrated damage management program in North Carolina to fully address the need for resolving damage caused by pigeons, starlings, and house sparrows while minimizing impacts to the human environment.

Comments from the public involvement process were reviewed for substantive issues and alternatives which were considered in developing the Decision for the EA. After consideration of the analysis contained in the EA and review of public comments, a Decision and Finding of No Significant Impact (FONSI) for the EA was issued on October 29, 2003. The Decision and FONSI selected the proposed action which implemented an integrated damage management program in North Carolina using multiple methods to adequately address the need to manage damage caused by pigeons, starlings, and house sparrows. Information from WS' programmatic Final Environmental Impact Statement (FEIS) (USDA 1997)<sup>2</sup> has been incorporated by reference into this summary report and new Decision.

All damage management activities, including disposal requirements, are conducted consistent with: 1) the Endangered Species Act of 1973, 2) the Migratory Bird Treaty Act, 3) Executive Order (EO) 12898<sup>3</sup>, 4) EO 13045<sup>4</sup>, 5) EO 13186<sup>5</sup>, 6) EO 13112<sup>6</sup>, and 7) federal, state, and local laws, regulations, and policies.

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<sup>1</sup>Copies of the EA and 2003 Decision/FONSI are available for review from the State Director, USDA/APHIS/WS, 6213-E Angus Drive, Raleigh, NC 27617 or by visiting the APHIS website at [http://www.aphis.usda.gov/wildlife\\_damage/nepa.shtml](http://www.aphis.usda.gov/wildlife_damage/nepa.shtml).

<sup>2</sup>Copies of WS' programmatic FEIS are available from USDA/APHIS/WS-Operational Support Staff, 4700 River Road, Unit 87, Riverdale, MD 20737-1234.

<sup>3</sup>Executive Order 12898 promotes the fair treatment of people of all races, income levels, and cultures with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

<sup>4</sup>Executive Order 13045 ensures the protection of children from environmental health and safety risks since children may suffer disproportionately from those risks.

<sup>5</sup>Executive Order 13186 directs federal agencies to protect migratory birds and strengthen migratory bird conservation by identifying and implementing strategies that promote conservation and minimize the take of migratory birds through enhanced collaboration.

<sup>6</sup>Executive Order 13112 states that each Federal agency whose actions may affect the status of invasive species shall, to the extent practicable



WS is authorized by law to reduce damage caused by wildlife through the Act of March 2, 1931 (46 Stat. 1468; 7 U.S.C. 426-426b), as amended and the Act of December 22, 1987 (101 Stat. 1329-331, 7 U.S.C. 426c). Wildlife damage management is the alleviation of damage caused by or related to the presence of wildlife and is an integral part of wildlife management (The Wildlife Society 1992). WS uses an integrated wildlife damage management approach in which a combination of methods may be used or recommended to reduce damage (WS Directive 2.105). The goal of wildlife damage management conducted by WS is to respond to requests for assistance to manage damage and threats to human safety caused by wildlife. Integrated damage management strategies employed by WS to resolve requests for assistance are based on WS' Decision Model (Slate et al. 1992, USDA 1997, USDA 2003).

## II. PUBLIC INVOLVEMENT

The pre-decisional EA was made available to the public for review and comment from September 8, 2003 through October 6, 2003 by a legal notice published in *The News and Observer*, *Roanoke-Chowan County News Herald*, *Winston-Salem Journal*, *Charlotte Observer*, *Greensboro News and Record*, *Beaufort Hyde News*, *New Bern Sun Journal*, *Fayetteville Observer*, *Asheville Citizen Times*, *Daily Advance*, *Gates County Index*, and *The Roanoke-Chowan Shopper*. The legal notice was placed in each paper for one day. A letter of availability for the pre-decisional EA was also mailed directly to a total of 32 agencies, organizations, and individuals with probable interest in the proposed program. A total of three comment documents were received from the public during the public involvement process. All comments were analyzed to identify substantial new issues and alternatives. Several minor editorial changes suggested by comments were incorporated into the EA. Those minor changes enhanced the understanding of the proposed program, but did not change the analysis provided in the EA. All public comment letters are maintained in the administrative file located at the Wildlife Services State Office, Raleigh, North Carolina.

This summary report and new Decision along with the EA and the 2003 Decision/FONSI will be made available for public review and comment through a legal notice announcing a minimum of a 30-day comment period. The legal notice will be published in *The News and Observer* and posted on the APHIS website located at [http://www.aphis.usda.gov/wildlife\\_damage/nepa.shtml](http://www.aphis.usda.gov/wildlife_damage/nepa.shtml) according to WS' public notification requirements (72 FR 13237-13238). This new Decision will also be directly mailed to agencies, organizations, and individuals with probable interest in the proposed program. Comments received during the public involvement process will be fully considered for new substantive issues and alternatives. Unless new substantial issues and/or new alternatives are brought to WS' attention, this new Decision will take effect upon the close of the comment period.

## III. MONITORING

The WS program in North Carolina annually reviews program activities to determine impacts on issues identified to ensure that program activities are within the scope of analysis contained in the EA. The annual monitoring reports document WS' activities while discussing any new information that becomes available since the completion of the EA and the last monitoring report. If WS' activities, as identified in the annual monitoring reports, are outside the scope of the analyses in the EA or if new issues are identified from available information, further analysis would occur and the EA would be supplemented to the degree as identified by those processes pursuant to NEPA or a notice of intent to prepare an Environmental Impact Statement (EIS) would occur.

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and permitted by law: 1) reduce invasion of exotic species and the associated damages, 2) monitor invasive species populations, provide for restoration of native species and habitats, 3) conduct research on invasive species and develop technologies to prevent introduction, and 4) provide for environmentally sound control, promote public education on invasive species.



This summary report of WS' pigeon, starling, and sparrow damage management activities in North Carolina from federal fiscal year (FY)<sup>7</sup> 2003 through FY 2007 is being prepared to: 1) facilitate planning and interagency coordination, 2) streamline program management, 3) ensure WS' activities remain within the scope of analyses contained in the EA, and 4) clearly communicate to the public the analysis of individual and cumulative impacts of the proposed action since the Decision/FONSI was signed in 2003. This new Decision ensures WS' actions comply with NEPA, with the Council on Environmental Quality (40 CFR 1500), and with APHIS' NEPA implementing regulations (7 CFR 372).

#### IV. RELATIONSHIP OF THIS DOCUMENT TO OTHER ENVIRONMENTAL DOCUMENTS

***WS' Programmatic Final Environmental Impact Statement:*** WS has developed a programmatic FEIS that addresses the need for wildlife damage management in the United States (USDA 1997). The FEIS contains detailed discussions of potential impacts to the human environment from wildlife damage management methods used by WS. Pertinent information available in the FEIS has been incorporated by reference into the EA and this Decision.

#### V. AFFECTED ENVIRONMENT

The proposed action could be conducted on private, federal, state, tribal, and municipal lands in North Carolina to reduce damages and threats to agricultural commodities, natural resources, property, and public health and safety. The affected environment includes, but is not necessarily limited to, areas in and around buildings and parks, bridges, industrial sites, urban/suburban woodlots, and airport hangars, where pigeons, starlings, and sparrows may roost, loaf, or nest. Damage management activities may also be conducted at agricultural fields, vineyards, orchards, farmyards, grain mills, and grain handling areas (e.g., railroad yards) where pigeons, starlings, or sparrows destroy crops, feed on spilled grains, or contaminate food products for human or livestock consumption. Additionally, the area of the proposed action would include airports and surrounding property where pigeons, starlings, and sparrows represent a threat to aviation safety.

WS has reviewed the affected environment during evaluations of programs activities under the proposed action through annual monitoring reports and this summary report. The affected environment has not changed since the implementation of the proposed action and continues to be as addressed in the EA.

#### VI. MAJOR ISSUES

Issues are concerns of the public and/or professional community raised regarding potential environmental problems that might occur from a proposed action. Such issues must be considered in the NEPA decision process. Issues relating to the reduction of wildlife damage were raised during the scoping process for WS' programmatic FEIS (USDA 1997) and were considered in the preparation of the EA. Issues related to managing damage associated with rock pigeons, European starlings, and house sparrows in North Carolina were developed by WS in consultation with the United States Fish and Wildlife Service (USFWS) and the North Carolina Wildlife Resources Commission (NCWRC).

The EA fully describes the issues identified during the scoping process for WS' programmatic FEIS and during the development of the EA. The following issues were identified as important to the scope of the analysis (40 CFR 1508.25):

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<sup>7</sup>The federal fiscal year begins on October 1 and ends on September 30 the following year.



## **Issue 1 - Effects on Target Bird Species**

A common concern when addressing damage associated with a wildlife species is the effects on the populations of target species from methods used to manage damage associated with that species. The integrated approach of managing damage associated with pigeons, starlings, and house sparrows uses both non-lethal and lethal methods to resolve requests for assistance. Although non-lethal methods can disperse birds from areas where application occurs, those birds are generally unharmed. Therefore, no adverse affects are often associated with the use of non-lethal methods. However, methods used to lethally take pigeons, starlings, and house sparrows can result in local reductions in those species' populations in the area where damage or threats of damage were occurring. Rock pigeons, European starlings, and house sparrows are non-native species to North America and are afforded no protection under the Migratory Bird Treaty Act nor are those species protected by State law and regulations.

WS continued to provide both technical assistance and direct damage management as part of an integrated damage management approach to preventing and resolving damage caused by pigeons, starlings, and house sparrows in North Carolina from FY 2003 through FY 2007. Technical assistance was provided to cooperators through the dissemination of information regarding damage management techniques to prevent damage, through the demonstration of methods, and through site visits. Through technical assistance, WS' made recommendations on the appropriate methods available for use that a requestor could employ to resolve damage or reduce threats without WS' direct involvement.

Operational assistance occurs when WS is directly involved with employing methods to resolve, alleviate, or reduce threats associated with pigeons, starlings, and house sparrows. As directed by the selected alternative, WS' applies multiple methods as part of an integrated damage management program to resolve requests for assistance. WS' technical assistance and direct operational programs are discussed in detail in the EA (USDA 2003) and are also discussed in WS' programmatic FEIS (USDA 1997).

WS' activities to address damage caused by pigeons, starlings, and house sparrows using an integrated approach to resolve a request for assistance from FY 2003 through FY 2007 are summarized by FY below:

### **WS' Pigeon, Starling, and Sparrow Damage Management Activities during FY 2003**

WS continued to provide both technical and operational assistance in FY 2003 to those requesting assistance with managing damage and threats associated with pigeons, starlings, and house sparrows in North Carolina. Damages reported and verified by WS in FY 2003 occurred primarily from pigeons and starlings where excessive fecal material accumulated under roosting areas that required constant cleaning, caused economic damage, was aesthetically displeasing, and when accumulations occurred in areas of human activity, posed a threat to human safety from disease transmission.

Technical assistance was provided to those interested through the dissemination of handouts and information regarding damage management techniques, species identification, methods demonstrations, and site visits. During FY 2003, 12 technical assistance projects were conducted by WS that involved damage caused by starlings, seven were conducted for damage caused by pigeons, and no projects were conducted for house sparrows.

Operational assistance occurs when WS' is directly involved with employing methods to resolve or reduce threats associated with pigeons, starlings, or house sparrows. As directed by the selected alternative, WS' continued to apply multiple methods as part of an integrated damage management program to resolve requests for assistance in FY 2003. As part of an integrated management program to resolve requests for assistance in FY 2003, 530 pigeons were lethally removed by shooting, by live-



capturing birds in traps which were subsequently euthanized<sup>8</sup>, by the use of the chemical dispersal agent avitrol, and through the avicide DRC-1339. In addition, 140 house sparrows were taken through the use of avitrol in FY 2003 to alleviate damage. To resolve damage to property and to reduce threats to human safety, 10,020 European starlings were lethally removed using DRC-1339, and one starling was lethally removed with a firearm in FY 2003.

#### **WS' Pigeon, Starling, and Sparrow Damage Management Activities during FY 2004**

WS continued to provide both technical and operational assistance in FY 2004 to those requesting assistance with managing damage and threats associated with pigeons, starlings, and house sparrows in North Carolina. Similar to FY 2003, damages reported and verified by WS in FY 2004 occurred primarily from pigeons and starlings where excessive fecal material accumulated under roosting areas that required constant cleaning, caused economic damage, was aesthetically displeasing, and when accumulations occurred in areas of human activity, posed a threat to human safety from disease transmission.

During FY 2004, three technical assistance projects were conducted by WS through the dissemination of handouts and information regarding damage management techniques, species identification, methods demonstrations, and site visits involving damage caused by starlings, eight were conducted for pigeons, and no projects were conducted for house sparrows.

As directed by the selected alternative, WS' continued to apply multiple methods as part of an integrated damage management program to resolve requests for assistance in FY 2004. As part of an integrated damage management program, 376 pigeons were lethally removed by shooting, live-capture through trapping and euthanasia, and by the use of the avicide DRC-1339 to resolve requests for assistance in FY 2004. To resolve damage, 47 sparrows were taken through the use of avitrol in FY 2004 to alleviate damage. To resolve damage to property and to reduce threats to human safety, 2,181 European starlings were lethally removed using the avicide DRC-1339 in FY 2004.

#### **WS' Pigeon, Starling, and Sparrow Management Activities in North Carolina during FY 2005**

During FY 2005, no technical assistance projects were conducted by WS involving starlings, pigeons, and house sparrows. WS continued to provide operational assistance in FY 2005 to those requesting assistance with managing damage and threats associated with pigeons, starlings, and house sparrows in North Carolina. Similar to previous years, damages reported and verified by WS in FY 2005 occurred primarily from pigeons and starlings where excessive fecal material accumulated under roosting areas.

As part of an integrated management program to resolve requests for assistance in FY 2005, 1,813 pigeons were lethally removed by shooting, live-capture through trapping and subsequently euthanized, and by the use of the avicide DRC-1339. WS lethally removed 121 house sparrows in FY 2005 using avitrol to alleviate damage. To resolve damage to property and to reduce threats to human safety, 91 European starlings were lethally removed using firearms and the avicide DRC-1339 in FY 2005.

#### **WS' Pigeon, Starling, and Sparrow Damage Management Activities during FY 2006**

During FY 2006, two technical assistance projects were conducted involving starlings and twelve were conducted for pigeons. No technical assistance projects were conducted in FY 2006 that involved providing information on house sparrow damage management. Similar to other years, requests for

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<sup>8</sup>WS used those techniques described in the EA to euthanize live-captured birds.



assistance involved excessive fecal material accumulating under roosting areas where pigeons and starlings roost and loaf.

To resolve requests for assistance in FY 2006, a total of 1,055 pigeons were lethally removed by shooting, euthanized after live-capture in traps, and by the use of the avicide DRC-1339. WS used avitrol to remove a total of 80 house sparrows in FY 2006 to alleviate damage. To resolve damage to property and to reduce threats to human safety, 147 European starlings were lethally removed using firearms and the avicide DRC-1339 in FY 2006.

### **WS' Pigeon, Starling, and Sparrow Management Activities during FY 2007**

During FY 2007, no technical assistance projects were conducted that involved starlings, three were conducted for pigeons, and one project was conducted for house sparrows. Requests for operational assistance received by WS in FY 2007 occurred primarily from those experiencing damage to property and threats to human safety associated with large roosts of pigeons and starlings. Large accumulations of fecal matter can occur when large flocks of pigeons and starling consistently roost and loaf in the same areas. Those requesting assistance are concerned about threats of disease transmission from contact with fecal matter, from the damage to property that can occur from the acidity of fecal droppings, and the aesthetically displeasing smell and appearance of property covered in fecal matter.

To alleviate requests for direct operational assistance, WS' used lethal methods to take 1,341 pigeons in FY 2007. Methods employed by WS to lethally take pigeons included shooting with firearms, euthanizing pigeons after live-capture in traps, and through the use of DRC-1339. WS also employed non-lethal harassment techniques to disperse 32 pigeons from areas where damage was occurring using those methods described in the EA. One house sparrow was taken through the use of a firearm in FY 2007 to alleviate damage. To resolve damage to property and to reduce threats to human safety, 135 European starlings were lethally removed using firearms in FY 2007. An additional 947 starlings were dispersed to reduce damage or threats using those non-lethal dispersal methods describe in the EA.

### **Pigeon, starling, and house sparrow population impact analysis from WS' activities**

As discussed in the EA, rock pigeons, European starlings, and house sparrows are all non-native species in North America that often compete with native species for food and nesting habitat. The communal nesting behavior and roosting behavior of those three species along with the close association of those species with human activities often raises concerns about economic damages to agricultural resources, property, natural resources, and threats to human safety. Therefore, a reduction in the populations of those species could be viewed as benefiting the native environment in North Carolina. Rock pigeons, European starlings, and house sparrows are afforded no protection under the Migratory Bird Treaty Act nor afforded any protection by the State of North Carolina.

The analysis for magnitude of impact from lethal take generally follows the process described in Chapter 4 of WS' programmatic FEIS (USDA 1997). Magnitude is described in WS' programmatic FEIS (USDA 1997) as "*...a measure of the number of animals killed in relation to their abundance.*" Magnitude may be determined either quantitatively or qualitatively. Quantitative determinations are based on population estimates, allowable harvest levels, and actual harvest data. Qualitative determinations are based on population trends and harvest data when available. Generally, WS only conducts damage management on species whose population densities are high and usually only after they have caused damage. WS' take is monitored by comparing numbers of animals killed with overall populations or trends in populations to assure the magnitude of take is maintained below the level that would cause significant adverse impacts to the viability of native species populations (USDA 1997).



From FY 2003 through FY 2007, the WS program in North Carolina lethally removed a total of 5,115 pigeons, 12,575 starlings, and 389 house sparrows by shooting, trapping, avitrol, and the use of the avicide DRC-1339 (See Table 1).

**Table 1 - Take of pigeons, starlings, and sparrows by the WS' program in North Carolina by FY.**

<b>Fiscal Year</b>	<b>Rock Pigeons</b>	<b>European Starlings</b>	<b>House Sparrows</b>
<b>2003</b>	530	10,021	140
<b>2004</b>	376	2,181	47
<b>2005</b>	1,813	91	121
<b>2006</b>	1,055	147	80
<b>2007</b>	1,341	135	1
<b>Total</b>	<b>5,115</b>	<b>12,575</b>	<b>389</b>

The EA evaluated an annual take of up to 5,000 pigeons by WS to resolve requests for assistance to manage damage (USDA 2003). WS' highest level of take of pigeons occurred in FY 2005 when 1,813 pigeons were taken. WS' take of pigeons annually from FY 2003 through FY 2007 has been within the level of annual take analyzed in the EA. According to trend data gathered as part of the Breeding Bird Survey (BBS), pigeon populations in North Carolina are showing an increasing trend estimated at 1.9% annually from 1966 to 2007 (Sauer et al. 2008). Population trend estimates for the eastern United States shows a slightly declining population trend estimated at -0.4% since 1966 with a similar population trend estimated at -0.5% for the entire survey area in the United States (Sauer et al. 2008). Trend information available from the Christmas Bird Count (CBC) shows a sharp increase in pigeons observed during the survey conducted from the early 1970s through the late 1990s with the number of pigeons observed declining from the late 1990s through 2005 when the trend began showing a stable to increasing trend through the 2006-2007 survey (National Audubon Society 2002). The Partners In Flight (PIF) population database using guidelines published in Rich et al. (2004), estimated the pigeon population at 200,000 individuals in North Carolina. Based on the estimated statewide population, WS' highest take of 1,813 pigeons in FY 2005 would represent 0.9% of the total population estimated for pigeons in North Carolina. Take from other sources is currently not known and is not reported by the State nor the USFWS since pigeons are considered a non-native species. Given WS' limited impact to the estimated pigeon population in North Carolina and the increasing population trend in North Carolina estimated by the BBS and the CBC, WS' use of lethal damage management methods, based on the best available information, are having no adverse effects on pigeon populations in North Carolina.

An annual take of up to 100,000 starlings by WS in North Carolina was evaluated in the EA (USDA 2003). WS' total take of starlings from FY 2004 through FY 2007 was 12,575 birds. The highest level of take occurred in FY 2003 when 10,021 starlings were taken. WS' total take from FY 2003 through FY 2007 of starlings is below the estimated annual take analyzed in the EA. Trend data available from the BBS for starlings, indicates a slightly declining trend in North Carolina estimated at -0.4% annually since 1966 (Sauer et al. 2008). Starlings in the eastern BBS regions are showing a statistically significant downward trend estimated at -0.9% annually since 1966. More recent trend data collected since 1980 shows a slightly smaller decline estimate at -0.5% annually (Sauer et al. 2008). Similar to the regional trend, starling populations are trending significantly downward in the United States estimated at -0.6% annually since 1966 with a smaller decline estimated at -0.3% since 1980 (Sauer et al. 2008). CBC trend data shows a stable winter population in North Carolina since the late 1990s (National Audubon Society 2002). The PIF bird population database estimates the starling population in North Carolina at 2 million individuals (Rich et al. 2004). Based on the current population estimate of 2 million individuals, the highest level of take by WS in FY 2003 of 10,021 starlings removed 0.5% of the estimated population in North Carolina. Take from other sources is currently not known and is not reported by the State nor the USFWS since starlings are considered a non-native species. Based on WS' limited take of the estimated starling population in North Carolina from FY 2003 through FY 2007, WS' activities to alleviate or to



reduce threats associated with starlings in not adversely impacting starling populations in North Carolina.

The EA evaluated an annual take of up to 1,000 house sparrows by WS to resolve damage occurring to agricultural resources, natural resources, property, and threats to human safety. The highest level of take between FY 2003 and FY 2007 occurred in FY 2003 when 140 house sparrows were taken by WS. WS' total take of house sparrows from FY 2003 through FY 2007 totaled 389 birds which falls below the level of annual take evaluated in the EA. The PIF population database estimates the house sparrow population at 560,000 sparrows in North Carolina (Rich et al. 2004). Trending data from the BBS, suggests breeding populations of house sparrows are significantly declining in North Carolina estimated at -3.6% annually since 1966 (Sauer et al. 2008). Data from survey routes in the eastern United States is also showing significant declining trends since 1966 estimated at -2.8% with similar trends found across all routes in the United States estimated at -2.6% annually (Sauer et al. 2008). Survey data of house sparrows wintering in North Carolina is also showing downward trends since 1966 (National Audubon Society 2002). WS' highest level of take of house sparrows that occurred in FY 2003 would represent 0.03% of the estimated sparrow population in the State. The total take of house sparrows from FY 2003 through FY 2007 by WS was 389 sparrows which represents 0.07% of the estimated population. Since house sparrows are considered a non-native species in the United States and no depredation permit is required to take sparrows, take from by other entities is unavailable. Based on WS' limited take of house sparrows from FY 2003 through FY 2007 when compared to the estimated population in North Carolina, WS' take of house sparrows is not adversely affecting populations in the State. Any reductions in the house sparrow population could be considered as benefitting the native environment since house sparrows often compete with other native wildlife for nesting sites and food resources.

WS' damage management activities in North Carolina were site specific, and although local populations of pigeons, starlings, and sparrows were reduced or dispersed, there was no probable adverse impact on statewide populations of those birds from WS' activities. Pigeons, starlings, and sparrows are non-native, invasive species in the United States that are afforded no protection under the Migratory Bird Treaty Act or any North Carolina state laws. Those species often compete with native species for resources, such as food and nesting sites. Any reduction in pigeon, starling, or sparrow populations in North Carolina could be considered a beneficial impact to native bird species. Executive Order 13112 states that each federal agency whose actions may affect the status of invasive species shall, to the extent practicable and permitted by law; 1) reduce invasion of exotic species and the associated damages, 2) monitor invasive species populations, provide for restoration of native species and habitats, 3) conduct research on invasive species and develop technologies to prevent introduction, 4) provide for environmentally sound control, and 5) promote public education on invasive species. WS' activities to manage damage caused by pigeons, starlings, and house sparrows were pursuant to Executive Order 13112.

Program activities and their potential impact on target bird species have not changed from those analyzed in the EA. The effects on this issue are expected to remain insignificant.

## **Issue 2 - Effects on Other Wildlife Species, including T&E Species**

The issue of non-target species effects, including effects on threatened and endangered species arises from the use of non-lethal and lethal methods identified in the alternatives. The use of non-lethal and lethal methods has the potential to inadvertently disperse, capture, or kill non-target wildlife. WS' minimization measures and Standard Operating Procedures are designed to reduce the effects of damage management activities on non-target species' populations. To reduce the risks of adverse affects to non-target wildlife, WS selects damage management methods that are as target-selective as possible or applies such methods in ways that reduces the likelihood of capturing non-target species. Before initiating management activities, WS also selects locations which are extensively used by the target species and employs baits or lures which are preferred by those species. Despite WS' best efforts to minimize non-



target take during program activities, the potential for adverse affects to non-targets exists when applying both non-lethal and lethal methods to manage damage or reduce threats to safety.

Non-lethal methods have the potential to cause adverse affects on non-targets primarily through exclusion, harassment, and dispersal. Any exclusionary device erected to prevent access of target species also potentially excludes species that are not the primary reason the exclusion was erected. Therefore, non-target species excluded from areas may potentially be adversely impacted if the area excluded is large enough. The use of auditory and visual dispersal methods used to reduce damage or threats caused by target species are also likely to disperse non-targets in the immediate area the methods are employed. However, the potential impacts on non-target species are expected to be temporary with target and non-target species often returning after the cessation of dispersal methods.

The lethal take of non-targets from using those methods described in the EA is unlikely with take never reaching a magnitude that a negative impact on populations would occur. Any potential non-targets live-captured using non-lethal methods would be handled in such a manner as to ensure the survivability of the animal if released. The use of firearms is selective for target species since animals are identified prior to application; therefore no adverse impacts are anticipated from use of this method. The use of chemical methods, when used according to label directions, poses minimal hazards to non-target wildlife (USDA 1997).

While every precaution is taken to safeguard against taking non-targets during operational use of methods and techniques for resolving damage and reducing threats caused by wildlife, the use of such methods can result in the incidental take of unintended species. Those occurrences are minimal and should not affect the overall populations of any species. WS' take of non-target species during activities to reduce damage or threats to human safety caused by pigeons, starlings, and house sparrows is expected to be extremely low to non-existent. WS will continue to monitor annually the take of non-target species to ensure program activities or methodologies used in damage management activities do not adversely impact non-targets.

The EA concluded that WS' damage management activities would have no adverse affects on other wildlife species (non-target), including threatened and endangered species throughout the State when those activities were conducted within the scope analyzed in the EA. Methods used by WS are essentially selective for target species when applied appropriately. In addition, WS adheres to those minimization measures and procedures discussed in the EA to minimize the potential for non-target take. As discussed in Issue 1, the primary methods used during direct operational assistance by WS from FY 2003 through FY 2007 to resolve requests for assistance were non-lethal harassment techniques, shooting with firearms, euthanizing pigeons, starlings, and house sparrows live-captured in cage traps, and the use of DRC-1339. No take of non-target species occurred from WS' activities to resolve requests for assistance from FY 2003 through FY 2007 and no adverse affects were noted or brought to WS' attention from the use of any methods employed by WS.

*T&E Species* - A review of threatened and endangered (T&E) species listed by the USFWS and the NCWRC showed that additional listings of T&E species has occurred since the completion of the EA in October 2003. Additional mammal species listed as threatened and endangered in North Carolina since the Decision/FONSI was signed in 2003 include the gray bat (*Myotis grisescens*), finback whale (*Balaenoptera physalus*), humpback whale (*Megaptera novaeangliae*), right whale (*Balaena glacialis*), sperm whale (*Physeter catodon*), sei whale (*Balaenoptera borealis*), and the gray wolf (*Canis lupus*).

Bird species include the Bachman's warbler (*Vermivora bachmanii*), ivory-billed woodpecker (*Campephilus principalis*), Kirtland's warbler (*Dedroica kirtlandii*), Eskimo curlew (*Numenius borealis*), cahow (*Pterodroma cahow*), and the wood stork (*Mycteria americana*). Other species include the tan



riffleshell (*Epioblasma florentina walkeri*), American burying beetle (*Nicrophorus americanus*), smalltooth sawfish (*Pristis pectinata*), and pondberry (*Lindera melissifolia*). Based on WS' activities described in the EA, WS has determined that program activities to manage damage caused by pigeons, starlings, and house sparrows will have no effect on those species listed as threatened or endangered since the Decision/FONSI was signed for the EA.

WS' program activities in North Carolina to manage damage caused by pigeons, starlings, and house sparrows has not changed from those described in the EA. Thus, WS' determination of no adverse affect is still valid and appropriate for the proposed action for those species addressed in the EA. Program activities and their potential impacts on other wildlife species, including T&E species have not changed from those analyzed in the EA. Impacts of the program on this issue are expected to remain insignificant.

### **Issue 3 - Effects on Human Health and Safety**

The EA concluded that when damage management activities are conducted to reduce damage caused by birds that there are potentially negative and positive impacts to human safety from those activities. Based on the analyses in the EA and WS' programmatic FEIS, when those activities are conducted according to WS' directives and standard operating procedures, according to federal, state, and local laws, and to label requirements, those activities pose minimal risks to human safety (USDA 1997, USDA 2003). The analyses in the EA also concluded that WS' activities to reduce threats and hazards associated with pigeons, starlings, and sparrows were likely to have positive impacts to human health and safety by addressing safety issues and disease transmission associated with those birds. Positive benefits would include reducing threats associated with work place safety caused by accumulations of bird feces under bird roosts in areas where people work and are likely to encounter feces or surfaces contaminated with bird feces. Other positive impacts include reducing potential bird strikes at airports. Aircraft striking birds can lead to extensive damage to aircraft and can threaten passenger safety.

WS' activities to reduce or alleviate bird damage in North Carolina did not cause any adverse impacts to human health and safety. Program activities and methods, and their potential impacts on human health and safety have not changed from those analyzed in the EA. Impacts of the program on this issue are expected to remain insignificant.

### **Issue 4 - Impacts to Stakeholders, including Aesthetics**

The EA concluded the effects on aesthetics would be variable depending on the damage situation, stakeholders' values towards wildlife, and their compassion for those who are experiencing damage from pigeons, starlings, and/or sparrows. The WS program in North Carolina only conducts activities at the request of the affected property owner or resource manager. Upon receiving a request for assistance, WS addresses issues/concerns and explanations are given for the reasons why a particular method or group of methods would be the most effective in reducing damage for the specific situation. Methods employed to reduce or resolve damage is agreed upon by the cooperator according to a cooperative service agreement.

The ability to view and enjoy the aesthetic value of pigeons, starlings, or sparrows at a particular site would be somewhat limited if the birds were removed as part of an integrated approach to managing damage. However, new birds would most likely use the site in the future, although the length of time until these birds arrive is variable, depending on the site, time of year, and population densities of pigeons, starlings, or sparrows in the surrounding areas. The opportunity to view pigeons, starlings, and sparrows is available if a person makes the effort to visit sites outside of the damage management area.

Program activities and methods, and their potential impacts to stakeholders and aesthetics have not changed from those analyzed in the EA. Impacts of the program on this issue are expected to remain



insignificant.

#### **Issue 5 - Humaneness and Animal Welfare Concerns of Methods Used**

WS' personnel are experienced and professional in their use of management methods, and methods are applied as humanely as possible. WS' activities and methods to manage damage caused by pigeons, starlings, and house sparrows in North Carolina and the potential impacts on humaneness have not changed from those analyzed in the EA. Impacts of the program on this issue are expected to remain insignificant.

### **VII. ISSUES NOT CONSIDERED IN DETAIL**

WS has reviewed the issues not considered in detail as described in the EA and has determined that the analysis provided in the EA has not changed and is still appropriate. Effects on those issues continue to be insignificant.

### **VIII. ALTERNATIVES ANALYZED IN DETAIL**

The EA contains a detailed description and discussion of the alternatives and the effects of the alternatives on the issues identified (USDA 2003). Appendix B of the EA provides a description of the methods that could be used or recommended by WS under each of the alternatives. WS has reviewed the alternatives analyzed and determined the analyses in the EA are still appropriate for those alternatives.

The following four alternatives were developed to respond to the issues:

Alternative 1: Technical Assistance Only

Alternative 2: Integrated Bird Damage Management Program (Proposed Action/No Action)

Alternative 3: Non-lethal Bird Damage Management Only by WS

Alternative 4: No Federal WS Bird Damage Management

### **IX. ALTERNATIVES CONSIDERED BUT NOT ANALYZED IN DETAIL**

Several alternatives were also considered to address the issues but were not analyzed in detail with the rationale discussed in the EA (USDA 2003). WS has reviewed the alternatives analyzed but not in detail and determined the analyses in the EA are still appropriate for those alternatives considered.

### **X. PIGEON, STARLING, AND SPARROW DAMAGE MANAGEMENT METHODS**

Since the completion of the EA, a product with the reproductive inhibitor known as nicarbazin has been registered for use in North Carolina to manage pigeon populations by reducing the likelihood that eggs laid by pigeons will hatch. Nicarbazin is a complex of two compounds, 4,4'-dinitrocarbanilide (DNC) and 4,6-dimethyl-2-pyrimidinol (HDP) which interferes with the formation of the vitelline membrane that separates the egg yolk and egg white which prevents the development of an embryo inside the egg (EPA 2005). The active component of nicarbazin is the DNC compound with the HDP compound aiding in absorption of DNC (EPA 2005). Nicarbazin was first developed to treat coccidiosis<sup>9</sup> outbreaks in broiler chickens and has been approved as a veterinary drug by the Food and Drug Administration (FDA) since 1955 for use in chicken feed to prevent the fungal disease coccidiosis (EPA 2005).

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<sup>9</sup>Coccidiosis is a fungal pathogen known to infect birds and livestock causing diarrhea, dehydration, and can prevent proper growth of livestock. For more information on coccidiosis, see the EA (USDA 2003).



Nicarbazin, as a reproductive inhibitor for pigeons, has been registered with the Environmental Protection Agency (EPA) as a pesticide pursuant to the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) under the trade name OvoControl® P (Innolytics, LLC, Rancho Santa Fe, CA). OvoControl® P (EPA Reg. No. 80224-1) is a restricted use pesticide registered for use in North Carolina for reducing the egg hatch of urban pigeons. The formulation for pigeons contains 0.5% of the active ingredient nicarbazin by volume as a ready-to-use bait for pigeons in urban areas only. Urban areas have been defined by the EPA as municipalities and surrounding areas with a population of 50,000 or more people. Baiting can only occur by applicators certified by the State and only on rooftops or other flat paved or concrete surfaces such as buildings, office parks, malls, hospitals, bridges, airports, tunnels, and commercial sites.

Since OvoControl® P is commercially available to those with a certified applicators license, the use of the product could occur under any of the alternatives discussed in the EA and therefore, the effects of the use would be similar across all the alternatives. Under the proposed action, WS could use or recommend nicarbazin under the trade name OvoControl® P as part of an integrated approach to managing damages associated with pigeons. WS' use of nicarbazin under the proposed action would not be additive since the use of product could occur from other sources, such as private pest management companies or those experiencing damage could become a certified applicator and apply the bait themselves.

Population management from the use of reproductive inhibitors occurs through a reduction in the recruitment of new birds into the population by limiting reproductive output. A reduction in the population occurs when the number of birds being recruited into the population can not replace those individuals that die from other causes each year which equates to a net loss in the number of individuals in the population leading to a reduction in the population. Although not generally considered a lethal method since no direct take occurs, reproductive inhibitors can result in the reduction of a target species' population. WS' use or recommendation of nicarbazin would target local pigeon populations identified as causing damage or threatening human safety. Although a reduction in pigeon populations would likely occur from constant use of nicarbazin, the actual reduction in the population annually would be difficult to derive prior to the initiation of the use of nicarbazin.

One of the difficulties in calculating an actual reduction in a targeted population prior to application of the bait is that consumption of nicarbazin treated bait as currently formulated does not appear to completely eliminate egg hatch in pigeons. Current studies on nicarbazin as a reproductive inhibitor for pigeons has shown variability in hatch rates of pigeons fed treated baits. In addition, pigeons must consume bait treated with nicarbazin daily in the correct dosage throughout the breeding season to achieve the highest level of effectiveness in reducing egg hatch. Pigeons can breed year-around with peak breeding occurring from February through October (Johnston 1992). Giunchi et al. (2007) found that when pigeons were fed treated baits (800 ppm) the number of hatchlings produced declined between 13% and 48% compared to a control group. When pigeons were fed doses of nicarbazin treated bait daily in cage studies at the levels currently found in OvoControl® P (5,000 parts per million (ppm)), Avery et al. (2008) found that the rate of egg hatch was reduced by 59% in captive pigeons. In simulating a 50% reduction in egg hatch, Giunchi et al. (2007) predicted through modeling that a population of 5,000 pigeons would be reduced by half if a 50% reduction in pigeon egg hatch occurred annually over a five-year period. The same population would rebound back to 5,000 individuals within five years if egg hatch returned to normal.

Since the effects of nicarbazin on egg hatch are reversible if no longer provided for consumption (Avery et al. 2006, Giunchi et al. 2007, Avery et al. 2008), the reduction in the local pigeon population from the use of nicarbazin can be maintained at appropriate levels where damages or threats are resolved by increasing or decreasing the amount of nicarbazin treated bait available to target pigeons. Although localized pigeon populations would likely be reduced from the use of nicarbazin, the extent of the reduction would be variable given the uncertainty in effectiveness of nicarbazin to reduce egg hatch in pigeons. When pigeons were provided nicarbazin in cage trials at dosage levels found formulated in



OvoControl® P (5,000 ppm), not all eggs laid were infertile with 41% of the eggs producing apparently healthy chicks (Avery et al. 2008).

Label requirements of OvoControl® P restrict the application of the product to urban areas where treated bait can be placed on rooftops or other flat, concrete surfaces which further limits the extent of the products use for reducing pigeon populations. Based on current information, WS' use or recommendation of nicarbazin formulated under the trade name OvoControl® P will not adversely affect pigeon populations in North Carolina since WS' activities will not be additive to those activities that could occur in the absence of WS' use of the product. The resultant reduction in the pigeon population from the use of nicarbazin would be highly variable given the variability in the effectiveness of the product to reduce egg hatch in pigeons. However, given that the effects of nicarbazin are only temporary if birds are not fed an appropriate dose of nicarbazin daily, the reduction in the population could be fully reversed if treated bait is no longer supplied and other conditions (e.g., food, disease) are favorable for population growth. As discussed previously, any reduction in local pigeon populations could be viewed as benefitting other native wildlife since pigeons can compete with native bird species for food and shelter.

The potential adverse affects to non-target wildlife are also a concern from the use of nicarbazin to manage pigeon populations. Exposure of non-target wildlife to nicarbazin could occur either from direct ingestion of the bait by non-target wildlife or from secondary hazards associated with wildlife consuming birds that have eaten treated bait. Several label restrictions of OvoControl® P are intended to mitigate risks to non-target wildlife from direct consumption of treated bait (EPA 2005). Daily observation of bait sites for pigeon and non-target activity must occur during a five to fourteen day acclimation period. The required acclimation period habituates pigeons to feeding in one location at a certain time period. Once pigeons are acclimated and no targets are observed feeding on the bait, observations for non-targets must occur once weekly until application of treated bait ends. During the observation periods, the applicator must be present on site until all bait has been consumed. Non-target risks are further minimized by requirements that bait only be placed on rooftops in urban areas and if not practical, baiting is limited to paved and/or on hard concrete surfaces. All unconsumed bait must also be retrieved daily which further reduces threats of non-target consuming treated bait.

In addition, nicarbazin is only effective in reducing the hatch of eggs when blood levels of DNC are sufficiently elevated in a bird species. When consumed by birds, nicarbazin is broken down into the two base components of DNC and HDP which are then rapidly excreted. To maintain the high blood levels required to reduce egg hatch, birds must consume nicarbazin daily at a sufficient dosage that appears to be variable depending on the bird species (Yoder et al. 2005, Avery et al. 2006). For example, to reduce egg hatch in Canada geese (*Branta canadensis*), geese must consume nicarbazin at 2,500 ppm compared to 5,000 ppm required to reduce egg hatch in pigeons (Avery et al. 2006, Avery et al. 2008). In pigeons, consuming nicarbazin at a rate that would reduce egg hatch in Canada geese did not reduce the hatchability of eggs in pigeons (Avery et al. 2006). With the rapid excretion of the two components of nicarbazin (DNC and HDP) in birds, non-targets birds would have to consume nicarbazin daily at sufficient doses to reduce the rate of egg hatching.

Secondary hazards also exist from wildlife consuming pigeons that have ingested nicarbazin. As mentioned previously, once consumed, nicarbazin is rapidly broken down into the two base components DNC and HDP. DNC is the component of nicarbazin that limits egg hatchability while HDP only aids in absorption of DNC into the bloodstream. DNC is not readily absorbed into the bloodstream and requires the presence of HDP to aid in absorption of appropriate levels of DNC. Therefore, to pose a secondary hazard to wildlife, ingestion of both DNC and HDP from a pigeon carcass would have to occur and HDP would have to be consumed at a level to allow for absorption of the DNC into the bloodstream. In addition, an appropriate level of DNC and HDP would have to be consumed from a pigeon carcass daily to produce any negative reproductive affects to other wildlife since current evidence indicates a single



dose does not limit reproduction. To be effective nicarbazin (both DNC and HDP) must be consumed daily during the duration of the reproductive season to limit the hatchability of eggs. Therefore, to experience the reproductive affects of nicarbazin, a pigeon that had consumed nicarbazin would have to be consumed daily and a high enough level of DNC and HDP would have to be available in the pigeon carcass and consumed for reproduction to be affected. Based on the risks and likelihood of wildlife consuming a treated pigeon daily and receiving the appropriate levels of DNC and HDP daily to negatively impact reproductively, secondary hazards to wildlife from the use of nicarbazin are extremely low (EPA 2005).

Although some risks to other non-target species besides bird species does occur from the use of OvoControl® P, those risks are likely to be minimal given the restrictions on where bait can be applied (e.g., on rooftops, on pavement at airports). Although limited toxicological information for nicarbazine exists for wildlife species besides certain bird species, available toxicology data indicates nicarbazin is relatively non-toxic to other wildlife species (World Health Organization 1998, EPA 2005, California Department of Pesticide Regulation 2007). Given the use restriction of OvoControl® P and the limited locations where bait can be applied, the risks of exposure to non-targets would be extremely low.

WS has reviewed the list of threatened and endangered species listed in North Carolina and determined that the use of nicarbazin under the trade name OvoControl® P will have no effect on those species listed in the State. Restricting the use of the product to use on rooftops and paved concrete areas where pigeons are conditioned to feed along with the bait-type (pellets) of the product and the limited availability of the product during application ensures the use of nicarbazin will have no effect on threatened and endangered species. WS' will continue to monitor pigeon damage management activities and those species listed in the State to ensure compliance with the Endangered Species Act.

Threats to human safety from the use of OvoControl® P will likely be minimal if labeled directions are followed. The use pattern of OvoControl® P will also ensure threats to public safety are minimal. Label requirements require treated bait to be applied on rooftops of buildings or other areas restricted to public access (e.g., airports). The EPA has characterized OvoControl® P as a moderate eye irritant. The United States Food and Drug Administration (FDA) has established a tolerance of nicarbazin residues of 4 parts per million allowed in uncooked chicken muscle, skin, liver, and kidney (21 CFR 556.445). The EPA characterized the risks of human exposure as low for a similar product used to reduce egg hatch in Canada geese. The EPA also concluded that if human consumption occurred, a prohibitively large amount of nicarbazin would have to be consumed to produce toxic effects (EPA 2005). Based on the use pattern of the OvoControl® P and if label instructions are followed, risks to human safety will be low with the primary exposure occurring to those handling and applying the product. Safety procedures required by the label, when followed, will minimize risks to handlers and applicators.

The use of nicarbazin on the aesthetic values of pigeons occurs primarily from the inability of those interested to enjoy viewing, feeding, and photographing pigeons along with knowing pigeons are free-ranging. The aesthetic value of a local pigeon population would likely lessen from a reduction in a population that would result from the use of nicarbazin. As previously mentioned, the rate of population decline would be variable from the use of nicarbazin since effectiveness of the product varies. However, the rate of decline in a localized pigeon population is likely to occur at a gradual rate compared to other lethal removal programs that target localized pigeon populations. Giunchi et al. (2007) predicted through modeling that a population of 5,000 pigeons would be reduced by half if a 50% reduction in pigeon egg hatch occurred annually over a five-year period. However, damage would continue to occur from those pigeons which could affect the aesthetic value of property and threaten human safety if pigeon populations remain sufficient for extended periods of time. Overall, the aesthetic value of a localized pigeon population would be similar to the use of other lethal methods discussed in the EA since a population decline would occur.



The use of ncarbazine would generally be considered as a humane method of managing local populations of pigeons. Ncarbazine reduces the hatchability of eggs laid by pigeons and appears to have no adverse affects on pigeons consuming bait daily and does not appear to adversely affect those chicks that do hatch from parents fed ncarbazine (Avery 2006, Avery 2008). Ncarbazine has been characterized as a veterinary drug since 1955 by the FDA for use in broiler chickens to treat outbreaks of coccidiosis with no apparent ill effects to chickens. Based on current information, the use of ncarbazine would generally be considered humane based on current research.

Overall, the use of ncarbazine would have no adverse affects on non-target wildlife that may consume bait or consume pigeons that have consumed bait, will not adversely affect human safety given the use restriction of the product that are found on the label, which if followed, will minimize human exposure to the product, will not adversely affect the aesthetic values of pigeons since pigeons are common in the State and the population decline would be gradual, and the product would likely be considered humane since only the hatching rate of eggs laid would be reduced after consumption with no apparent adverse affects to the pigeons consuming bait or the chicks that do hatch from eggs. WS' potential use of OvoControl® P under the proposed action would not adversely affect any aspect of the issues identified and would allow for additional methods to be available for use in an integrated approach to managing damage caused by pigeons.

## **XI. ENVIRONMENTAL CONSEQUENCES**

WS has reviewed the EA and has determined that the environmental impacts on the quality of the human environment from activities conducted pursuant to the EA will continue to be insignificant, and that no substantive changes in the analysis are necessary at this time. From FY 2003 through FY 2007, the level of WS' annual take of pigeons, starlings, and sparrows in North Carolina falls within the scope of analysis provided in the EA. Any changes in the scope, methods, or a change in environmental laws or regulations may trigger additional analyses.

## **XII. DECISION AND RATIONALE**

I have carefully reviewed the EA, the comments received during the public involvement process for the pre-decisional EA, the 2003 Decision/FONSI, and the information analyzed in this summary report. I find the proposed program to be environmentally acceptable, addressing the issues and needs while balancing the environmental concerns of management agencies, landowners, advocacy groups, and the public. The analyses in the EA adequately addresses the identified issues which reasonably confirm that no significant impact, individually or cumulatively, to wildlife populations or the quality of the human environment are likely to occur from the proposed action, nor does the proposed action constitute a major federal action that would warrant the development of an EIS. Therefore, the analysis in the EA remains valid and does not warrant the completion of an EIS.

Based on the EA, the issues identified in the EA are best addressed by continuing Alternative 2 - Integrated Bird Damage Management Program (Proposed Action/No Action) and applying the associated mitigation measures discussed in Chapter 3 of the EA. Alternative 2 successfully addresses 1) pigeon, starling, and house sparrow damage management using a combination of the most effective methods and does not adversely impact the environment, property, and/or non-target species, including threatened and endangered species; (2) it offers the greatest chance at maximizing effectiveness and benefits to resource owners and managers while minimizing cumulative impacts on the quality of the human environment that might result from the program's effect on target and non-target species populations; (3) it presents the greatest chance of maximizing net benefits while minimizing adverse impacts to public health and safety; and (4) it offers a balanced approach to the issues of humaneness and aesthetics when all facets of those



issues are considered. Further analysis would be triggered if changes occur that broaden the scope of damage management activities, that affect the natural or human environment, or from the issuance of new environmental regulations. Further analysis would be triggered if changes occur that broaden the scope of pigeon, starling, and sparrow damage management activities, that affect the natural or human environment, or from the issuance of new environmental regulations.

The rationale for my decision is based on several considerations. This decision takes into account public comments, social/political and economic concerns, public health and safety and the best available science. The foremost considerations are that: 1) pigeon, starling, and sparrow damage management will only be conducted by WS at the request of landowners/managers, 2) management actions are consistent with applicable laws, regulations, policies, and orders, and 3) no adverse impacts to the environment were identified in the analyses. As a part of this Decision, the WS program in North Carolina will continue to provide effective and practical technical assistance and direct management techniques that reduce damage.

The WS program in North Carolina will implement the proposed action in compliance with all applicable standard operating procedures described in Chapter 3 of the EA. This new Decision will take effect at the close of the public involvement process after publication of a legal notice making the EA, the 2003 Decision/FONSI, and this summary report and new Decision available to the public for review and comment if no substantive issues or alternatives are identified during the public comment period. New issues or alternatives raised after publication of public notices will be fully considered to determine whether the EA and this Decision should be revisited and, if appropriate, revised, or if a Notice of Intent to prepare an EIS should be issued.

#### **FINDING OF NO SIGNIFICANT IMPACT**

The analyses provided in the EA, the 2003 Decision/FONSI, and this summary report and new Decision indicates that there will not be a significant impact, individually or cumulatively, on the quality of the human environment as a result of the proposed action. I agree with this conclusion and therefore find that an EIS need not be prepared. This determination is based on the following factors:

1. Pigeon, starling, and sparrow damage management as conducted by WS in North Carolina is not regional or national in scope.
2. The proposed action would pose minimal risk to public health and safety. Risks to the public from WS' methods were determined to be low in a formal risk assessment (USDA 1997).
3. There are no unique characteristics such as park lands, prime farm lands, wetlands, wild and scenic areas, or ecologically critical areas that would be significantly affected. Built-in mitigation measures that are part of WS' standard operating procedures and adherence to laws and regulations will further ensure that WS' activities do not harm the environment.
4. The effects on the quality of the human environment are not highly controversial. Although there is some opposition to bird damage management, this action is not highly controversial in terms of size, nature, or effect.
5. Based on the analysis documented in the EA and the accompanying administrative file, the effects of the proposed damage management program on the human environment would not be significant. The effects of the proposed activities are not highly uncertain and do not involve unique or unknown risks.



6. The proposed action would not establish a precedent for any future action with significant effects.
7. No significant cumulative effects were identified through this assessment. The EA discussed cumulative effects of WS' activities on target and non-target species populations and concluded that such impacts were not significant for this or other anticipated actions to be implemented or planned within the State.
8. The proposed activities would not affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places, nor would they likely cause any loss or destruction of significant scientific, cultural, or historical resources.
9. WS has determined that the proposed project would not adversely affect any Federal or North Carolina State listed threatened or endangered species. This determination is based on the conclusions made by the USFWS during their 1992 programmatic consultation of WS' activities and subsequent Biological Opinion (USDA 1997). In addition, WS has determined that the use of methods will have no effect on those T&E species not included in the 1992 BO or their critical habitats and that the use Alpha-chloralose, lasers, and nicarbazin by WS will have no effect on any listed T&E species. WS has determined that the proposed program will not adversely affect any North Carolina State listed T&E species, species of concern, and species of special interest. The NCWRC concurs with this determination.
10. The proposed action would be in compliance with all federal, state, and local laws.



Charles S. Brown, Eastern Regional Director  
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12/11/08  
Date

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